Who Am I?

- Editorial Manager of *JAMA Otolaryngology – Head & Neck Surgery* since January 1, 2016 (Dr. Jay Piccirillo is Editor in Chief)
- Managing Editor of the *American Journal of Physiology-Endocrinology and Metabolism* since January 1, 2001
- Manager of Professional Development and Academic Publishing Services, Office of Faculty Affairs
- Executive MBA graduate of the Washington University Olin School of Business (December 2015)
  - Founder and President of Pesca Publishing
- Former journals manager at Mosby, now Elsevier, and daily newspaper reporter, so I understand medical journalism and the continuous deadline pressure that *JAMA* and other journals experience to inform the world about great biomedical research and health policy.
Today’s Objectives

- This is not a science lecture – I presume that you already have publishable research.
- This is not to promote a debate about traditional versus open-access publishing or transparent peer review.
- I will discuss a journalistic writing style and format that is more pleasing for the very busy editor, peer reviewer and general reader.
- I will present a behind-the-scenes peek into peer review.
- I want to help you: What do you want to know?
Writing Tips

Social Media (Facebook, Twitter, Devices)
Scientific Writing with William Faulkner and Ernest Hemingway
“Loving all of it even while he had to hate some of it because he knows now that you don’t love because: you love despite; not for the virtues, but despite the faults.”
Hemingway: The Journalist

“All you have to do is write one true sentence. Write the truest sentence that you know.”
Hemingway: The Journalist

When challenged to write a full story in six words, he responded:

“For Sale: baby shoes, never worn.”

--Courtesy of Dr. Jay Piccirillo
Beware of the Squid Technique

“The author is doubtful about the facts or reasoning and retreats behind a cloud of ink.”

Courtesy of Doug Savile, Tableau, September 1972
Writing the Manuscript

❖ Write like Hemingway, not like Faulkner.
❖ Be clear and concise.
❖ Balance clarity and depth.
❖ Be succinct, yet thorough.
❖ Use correct grammar and punctuation.
❖ Proofread! Make a good first impression.
Word Choice

- Use common words outside of the scientific terminology.
- Define technical words early.
- Never assume that your reader will understand “jargon.”
- Always spell out abbreviations at first mention.
- Don’t trust spell check.
- Proofread, proofread, proofread!
Word Choice

Use the word that conveys your meaning most accurately. When deciding between two such words, choose the shorter word:

<table>
<thead>
<tr>
<th>Approximately</th>
<th>About</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commence</td>
<td>Begin</td>
</tr>
<tr>
<td>Finalize</td>
<td>Finish</td>
</tr>
<tr>
<td>Prioritize</td>
<td>Rank</td>
</tr>
<tr>
<td>Terminate</td>
<td>End</td>
</tr>
<tr>
<td>Utilize</td>
<td>Use</td>
</tr>
</tbody>
</table>
Word Choice Problems

The problems that copyeditors see most frequently are *words carelessly interchanged*. This can affect scientific meaning.
Ability vs. Capacity

♦ *Ability* is the mental or physical power to do something, or the skill in doing it.

♦ *Capacity* is the full amount that something can hold, contain, or receive.
Continual vs. Continuous

♦ *Continual* means intermittent, occurring at repeated intervals.

♦ *Continuous* means uninterrupted, unbroken continuity.
Sentence Structure

Sentences are clearest, most forceful, and easiest to understand if they are simple and direct.
Sentence Structure

- Put parallel ideas in parallel form.
- Simplify by using “active voice.”
- Use strong verbs, not nouns.
- Write tight.
Put parallel ideas in parallel form.

To give a comfortable rhythm to your writing, use the same pattern for ideas that have the same logical function. Balance elements of the sentence. For example:

Instead of: “Tissue samples were weighed, then frozen, and analyses were performed.”

Write: “Tissue samples were weighed, frozen, and analyzed.”
Simplify by using active voice.

To simplify, use active, not passive, voice:

“The new drug caused a decrease in heart rate.”

Revised:

“The new drug decreased the heart rate.”
Use strong verbs, not nouns.

Make an adjustment  Adjust
Make a judgment     Judge
Make a decision     Decide
Perform an investigation  Investigate
Make a referral     Refer
Reach a conclusion  Conclude
Write tight.

<table>
<thead>
<tr>
<th>Original Expression</th>
<th>Simplified Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the present time…</td>
<td>Now</td>
</tr>
<tr>
<td>Due to the fact that…</td>
<td>Because</td>
</tr>
<tr>
<td>It may be that…</td>
<td>Perhaps</td>
</tr>
<tr>
<td>In the event that…</td>
<td>If</td>
</tr>
<tr>
<td>Prior to the start of…</td>
<td>Before</td>
</tr>
<tr>
<td>On two separate occasions…</td>
<td>Twice</td>
</tr>
</tbody>
</table>
Sentence Structure

When two or more words are combined to form a **compound adjective**, a hyphen is usually required, e.g., *disease-related sleepiness.*
Sentence Structure with SpongeBob SquarePants
Sentence Structure

- Bob is a sponge, and he has square pants.
- Square pants Bob has sponge like qualities.
- Bob’s sponge and square like qualities make him a great cartoon character.
- Bob’s a sponge and square like cartoon character who aspires to be famous.
Sentence Structure

- Bob is a sponge, and he has square pants.
- **Square-pants** Bob has **sponge-like** qualities.
- Bob’s **sponge- and square-like** qualities make him a great cartoon character.
- Bob’s a **sponge-and-square-like** cartoon character who aspires to be famous.
Example

The outcome of adults with acute lymphoblastic leukemia remains poor. While 90% of adult patients will achieve initial remission with chemotherapy, the majority will relapse and only 30-40% will achieve long term disease free survival.
The outcome of adults with acute lymphoblastic leukemia remains poor. While 90% of adult patients will achieve initial remission with chemotherapy, the majority will relapse and only 30-40% will achieve long-term disease-free survival.
Example

The outcome of adults with acute lymphoblastic leukemia remains poor. While 90% of adult patients will achieve initial remission with chemotherapy, the majority will relapse and only 30-40% will achieve long-term disease-free survival.
Sentence Structure

Check your syntax:

♦ “After standing in boiling water, we examined the flask.”

♦ “We examined the flask after it had been standing in boiling water.”

♦ We examined the flask after it stood in boiling water.
Sentence Structure

Check your syntax:

♦ “Having completed the study, the bacteria were of no further interest.”

♦ We were no longer interested in the bacteria after we completed the study.

♦ We completed the study and no longer cared about the bacteria.
Authorship

Ethics
Authorship

Responsible Authorship:

Washington University

http://www.wustl.edu/policies/authorship.html

Program for the Ethical and Responsible Conduct of Science and Scholarship

http://PERCSS.wustl.edu

Authorship Module
Ethical Guidelines for Publishing in a Biomedical Journal

- Intellectual honesty
- Accurate assignment of credit
- Fairness in peer review
- Collegiality in scientific and clinical interactions
- Transparency in conflicts of interest
- Protection of human and animal subjects
How to Avoid an Ethical Review of Your Paper

❖ You should be knowledgeable about:
  ♦ Conflict of Interest
  ♦ Duplicate Publication, Plagiarism, Falsification
  ♦ Prior Publication
  ♦ Experiments Involving Humans or Animals
  ♦ Fraud
Ethics in Publishing

✈ Plagiarism

♦ **Definition**: Taking the work of another. Copying a figure, table, data, or even wording from a published or unpublished paper without attribution.

♦ **How to Avoid**: Provide citations to the work of others. Obtain copyright permission if needed. Do not copy exact wording from another’s paper to yours, even if referenced, unless in quotes.
Ethics in Publishing

❖ Duplicate Publication

♦ **Definition**: Submission of or publication of the same paper or substantial parts of a paper in more than one place.

♦ **How to Avoid**: Do not submit the paper or parts of that paper to more than one journal at a time. Wait until your paper is rejected or withdraw it before submitting elsewhere.
Ethics in Publishing

◆ Redundant Publication

♦ **Definition**: Using text or data in a new paper from a paper that you have already published. Also called auto- or self-plagiarism.

♦ **How to Avoid**: Do not include material from a previous study in a new one, even for statistical analysis. Repeat control groups as needed.
Ethics in Publishing

Falsification and Fabrication

Definition: Changing or making up data in a manuscript, usually to improve the results of the experiment. Includes digital manipulation of images (blots, micrographs, etc.)

How to Avoid: Present the exact results obtained. Do not withhold data that don’t fit your hypothesis. Don’t try to beautify images with Photoshop—any manipulations must apply to the whole image.
Unacceptable Figure Manipulation

- Improper editing
- Improper grouping
- Improper adjustment
  - Authors should not:
    - Move
    - Remove
    - Introduce
    - Obscure
    - Enhance

any specific feature within an image. Images should appear as captured in the lab or clinical environment.
Ethics in Publishing

❖ Human/Animal Welfare Violations

♦ **Definition**: Treatment of experimental subjects that does not conform with accepted standards and journal policy.

♦ **How to Avoid**: Obtain prospective IRB/IACUC approval for the study protocol. Do not deviate from the protocol. Obtain approval for amendments as needed before altering the protocol.
Ethics in Publishing

❖ Conflict of Interest

♦ **Definition:** Real or perceived conflict due to employment, consulting, or investment in entities with an interest in the outcome of the research.

♦ **How to Avoid:** Disclose all potential conflicts to the Editor of the journal and within the manuscript itself.
Ethics in Publishing

- **Authorship Disputes**
  - **Definition**: Disputes arising from the addition, deletion, or change of order of authors.
  - **How to Avoid**: Agree on authorship before writing begins, preferably at the start of the study. Ensure that all authors meet criteria for authorship. Sign publisher authorship forms.
Online Submission
Online Submission

- eJournal Press
- ScholarOne Manuscript Central
- Editorial Manager
- Journal-owned systems
Submission Tips

- Follow the Instructions for Authors, especially those concerning the required figure formats
- Always check the merged PDF before sending it for review
- When your paper has been edited for publication, check the galley proofs carefully for errors introduced during the copyediting process
Peer Review
The Review Process

- Varies by Journal
- Managed by Editorial Office staff
- Reviewers are typically Editorial Board members or selected from a guest reviewer database
- Editors and Associate Editors may function as reviewers
- Editors and/or Associate Editors make the final decisions based on reviewer input
Who are the Reviewers?

- People like you
- Editorial board members who are carefully selected based on their expertise in the journal’s field
- Guest reviewers who may not know anything about your work and have to draw their conclusions strictly from your paper
- On occasion, editors in chief, associate editors
The AJP Peer Review Process

- American Journal of Physiology-Endocrinology and Metabolism Editorial Board:
  - >100 members
  - Responsible for reviewing 10-12 manuscripts a year
  - Invitation letter send with guidelines for reviewing, and they need to accept in writing
  - Send statistics to them twice a year
  - Remove them from board if they do not meet criteria
The Peer Review Process

- Possible Decisions (AJP-Endo and Metab:
  - Editor Decision Reject (Expeditious Review)
  - Review Editor Decision: Accept
  - Review Editor Decision: Accept Letter to the Editor
  - Review Editor Decision: Major Revisions
  - Review Editor Decision: Minor Revision
  - Review Editor Decision: Reject
Score Sheet

Overall Manuscript Rating (Required): LOWER 50%

Significance of Research Findings (Required): LOWER 50%

Novelty of Findings (Required): TOP 50%

Experimental Design and Quality of Data (Required): LOWER 50%

Recommendation (Required): Reject
Has the author stated that they have IACUC, IRB, or equivalent approval, if the study involves animals or humans? (Required): Yes

Is there any question of violation of APS's Guiding Principles in the Care and Use of Animals? (Required): N/A

Is the manuscript the right length? (Required): No

Are all of the figures and tables necessary? (Required): Yes

Is the use of figure color scientifically necessary? (Required): N/A
The Peer Review Process

I am pleased to report that they found your work to be well-performed, interesting and highly appropriate for AJP - Endocrinology and Metabolism. However, they did raise a few minor concerns that you will need to address before a final decision can be made. Importantly, an experimental control that was previously requested still needs to be included. Accordingly, I invite you to respond to the reviewers' comments and recommendations in a revised version that explicitly includes that proper experimental control. Your revision will be due within 3 months of today's decision letter. If, due to exceptional circumstances, you wish to request an extension, please do so by writing
The Peer Review Process

The observations, that exercise training decreases hepatic insulin uptake and causes excessive hyperglycemia during maximal exercise, is very interesting. However, the discussions and conclusion depend largely on published papers and accumulated knowledge that insulin has an inhibitory effect on hepatic glucose production and that insulin clearance is correlated with the binding of the hormone on its receptor in the liver. This study itself does not show any direct evidence that is addressing their conclusion. Therefore, the discussion is very descriptive. Even if I give consideration to human use, the results are just observation and do not extend our knowledge.
Specific Comments to Editors:

This is a well conceived and designed study; however it is only of minor importance in advancing the field. Importantly however, the results do not support the conclusions, in part, because the number of subjects per group is insufficient. The authors rely on deleting "outliers" (data points) and non-statistical trends to make their argument. Though I agree with the conclusions, more subjects are required to pass the statistical threshold. The paper is too long (~20%) and lacks focus. This is particular true of the Introduction which is too detailed and then reiterated in the Discussion. No, I would not rank the overall quality/impact of this manuscript in the top 25% of manuscripts I have reviewed in the field.
Specific Comments to Authors:

Abstract: the abbreviation AVF is not explained.

Results: Reference to Figure 1B is lacking in the text (page 10).

References: reference number is exceedingly high and should be reduced to the most significant and more recent previous studies (most of the references date before 2001).

Figures: figure number is very high and the Authors should try to reduce to the most essential ones.
Peer Review Tips

- Do your homework and send your work to the journal most likely to publish your work.
- Include an informative and well-written Cover Letter describing the unique aspects and importance of your work.
- Suggest preferred and non-preferred reviewers.
Nuances of Peer Review
Thank you for giving me the opportunity to review this manuscript. I believe I have already reviewed this manuscript, in a very similar version 1 or 2 years ago. Could you please verify this? The problem is that I don't see significant additional/clarifying experimental work added to the original version of the manuscript. Also figure 5 seems incomplete.
I would not rank the overall quality/impact of this manuscript in the top 25%. Reasons are that 1) the manuscript is not well written, there are many repetitive and inconsistent results; 2) the two major conclusions were drawn from not-well-designed studies-lack of appropriate controls. Please see the comments to the author for details.
Peer Review, Example 1
First Submission

- Major Revision, Reject, **Reject** = Reject
  - Low priority rating, no comment
Vast Differences in Peer Review
Peer Review, Example 2

Revision

- **Accept, Major Revision** = Major Revision

  - This set of revisions has thoroughly addressed the comments made by both original reviewers. I now recommend it be accepted for publication.

  - The response makes some progress towards a better description of __________. However it still does not remain entirely convincing as a potential tool in predicting the effects of __________. The changes suggested previously, and included in words, should be properly presented in the paper and integrated into a more comprehensive discussion.
Review by Only One Peer
Peer Review, Example 3
First Submission

- **Reject** = Reject

- This is one in a series of papers from a model of _________ by this author. The findings are markedly limited and provide little insight into _________. Unfortunately, the model produced different results from that of the previously reported study, which is often quoted and referred to in the entire paper. There are confusing statements regarding _________ and minimal examination of mechanisms.
It is a pleasure to read such a well written manuscript describing mechanistic work relevant to a clinical problem, in this case a new therapeutic option to treat ______. There is, however, contention in the field with differences of opinion and some antagonism regarding this treatment illustrating the importance of basic level studies such as this that address possible actions of the drug in the clinic. I therefore recommend rapid acceptance and publication without need for revision. The manuscript also requires little in the way of copy-editing.
Dealing with Rejection/Revision
Major Reasons for Rejection

- Inappropriate for the journal
  - Do your homework

- Merely confirmatory/incremental
  - Avoid Least Publishable Unit (LPUs)

- Describes poorly-designed or inconclusive studies
  - Focus on your hypothesis

- Poorly written
  - Great science in an ugly package can still be rejected
Revisions

- If your paper is returned for revision, you are in good company.
- It’s OK to get mad, but don’t act on it!
- Try to understand what the reviewers are really saying:
  - If the reviewers did not understand your work, is it because you didn’t present it clearly in the first place?
- Look for clues from the editor (the final arbiter) as to the extent of revision needed:
  - Re-writes only
  - More experiments
Responding to Reviewers

- Complete additional experiments if needed
- Address all comments in a point-by-point fashion
  - Resist the temptation to prepare an impassioned response to points with which you disagree
  - Stand firm (diplomatically) if that is truly the right thing to do
- Sincerely thank the editor and reviewers for helping you to improve your work
  - They have invested a lot of time, mostly on a voluntary basis
- Ask a neutral colleague to review your response
Other Tips for Success

- Know the journal, its editor, and why you submitted your paper there
- Follow the instructions for authors
- Avoid careless spelling, grammar, formatting mistakes
- Make sure references are appropriate and accurate
  - Remember who your reviewers might be!
- Ensure appropriate file format, including figures
  - Is the on-line version the one you want the reviewers to see?
- Confirm receipt of submission
Other Tips for Success

- Read your go-to journal.
- Learn what your peers read.
- Learn how to be a peer reviewer since you will
  - Understand what reviewers do and
  - Learn by author mistakes.
- Be a friend and member of the “collective hive” for your go-to journal – ask to review for them and serve on their editorial board.
- Just keep trying! Your revisions are teaching you something.
International Committee of Medical Journal Editors

ICMJE

http://www.icmje.org
Resources and Acknowledgments

- Kim E. Barrett, Chair, American Physiological Society (APS) Publications Committee
- Margaret Reich, APS Director of Publications and Executive Editor
- Dennis Brown, Editor, *AJP-Cell*; Alberto Najletti, *AJP-Heart*
- Writing and Presenting Scientific Papers (Birgitta Malmfors, Phil Garnsworthy, Michael Grossman)
- Essentials of Writing Biomedical Research Papers (Mimi Zeiger)
- Jay Piccirillo, MD